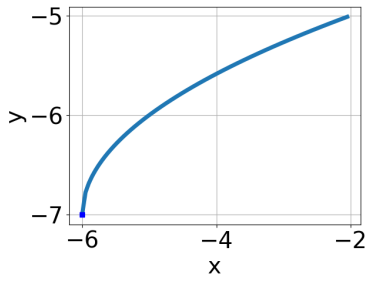
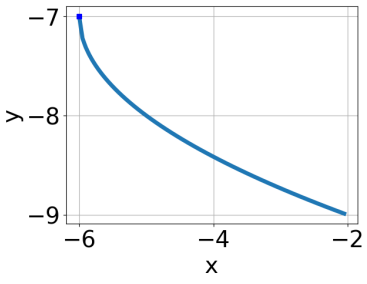
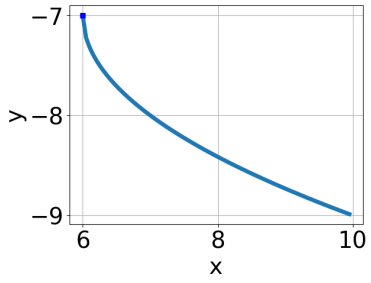
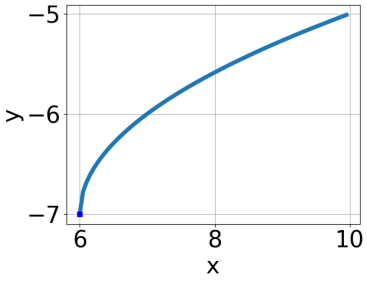
1. Choose the graph of the equation below.

$$f(x) = \sqrt{x+6} - 7$$

A.


C.


B.


D.


E. None of the above.

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2. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{14x^2 + 10} - \sqrt{39x} = 0$$

A. $x \in [-0.2, 1.2]$

B. All solutions lead to invalid or complex values in the equation.

C. $x_1 \in [-0.2, 1.2]$ and $x_2 \in [2.5, 5.5]$

D. $x_1 \in [-4.5, -0.9]$ and $x_2 \in [-5.29, 0.71]$

E. $x \in [1.9, 5.3]$

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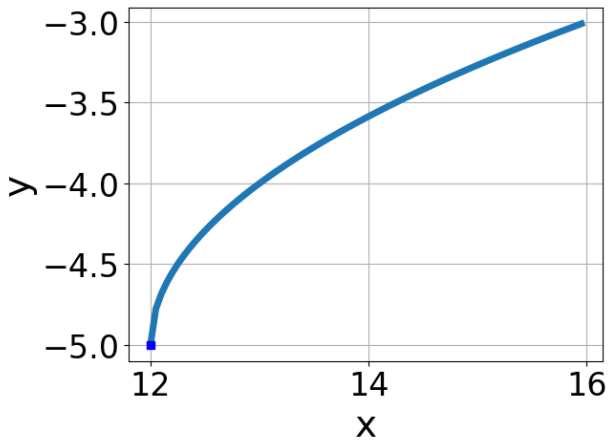
3. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x-12} - 5$

B. $f(x) = -\sqrt[3]{x-12} - 5$

C. $f(x) = \sqrt[3]{x+12} - 5$

D. $f(x) = -\sqrt[3]{x+12} - 5$

E. None of the above

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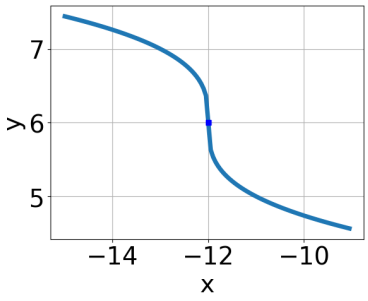
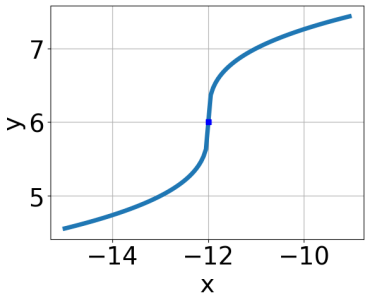
4. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x+12} + 6$$

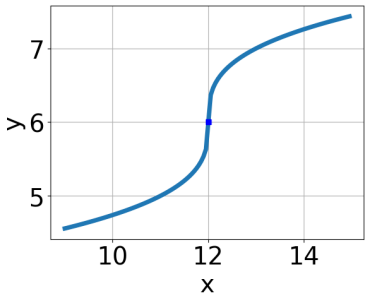
A.



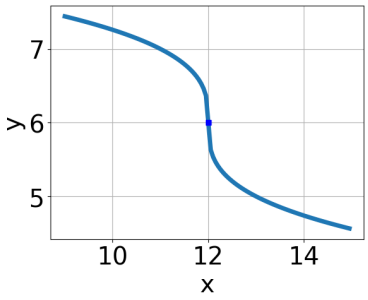
C.



B.



D.



E. None of the above.

---

5. What is the domain of the function below?

$$f(x) = \sqrt[5]{9x+3}$$

A. The domain is $(-\infty, a]$, where $a \in [-2.33, 2.67]$

B. $(-\infty, \infty)$

C. The domain is $[a, \infty)$, where $a \in [-5, -2]$

D. The domain is $[a, \infty)$, where $a \in [-2.33, 3.67]$

E. The domain is $(-\infty, a]$, where $a \in [-5, -2]$

---

6. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{2x+2} - \sqrt{-4x-4} = 0$$

A. $x \in [-0.9, 4]$

B. $x \in [-2.2, -0.1]$

C. $x_1 \in [-2.2, -0.1]$ and $x_2 \in [-2, 3]$

D. $x_1 \in [-2.2, -0.1]$ and $x_2 \in [-2, 3]$

E. All solutions lead to invalid or complex values in the equation.

---

7. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{2x-5} - \sqrt{-5x-2} = 0$$

A. $x \in [-0.04, 0.7]$

B. $x \in [0.86, 1.64]$

C. All solutions lead to invalid or complex values in the equation.

D. $x_1 \in [-0.8, -0.19]$ and $x_2 \in [0.5, 5.5]$

E. $x_1 \in [-0.04, 0.7]$ and $x_2 \in [0.5, 5.5]$

---

8. What is the domain of the function below?

$$f(x) = \sqrt[4]{-7x - 4}$$

A. $(-\infty, \infty)$

B. $(-\infty, a]$, where $a \in [-4.6, -1.5]$

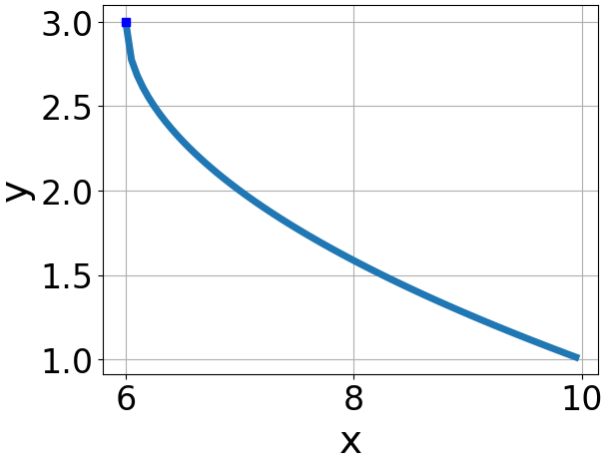
C. $[a, \infty)$, where $a \in [-5, -0.7]$

D. $(-\infty, a]$, where $a \in [-0.8, 1.6]$

E. $[a, \infty)$, where $a \in [-0.7, 0.2]$

---

9. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt{x+6} + 3$

B. $f(x) = \sqrt{x-6} + 3$

C. $f(x) = -\sqrt{x-6} + 3$

D. $f(x) = \sqrt{x+6} + 3$

E. None of the above

---

10. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{18x^2 + 72} - \sqrt{90x} = 0$$

A. All solutions lead to invalid or complex values in the equation.

B. $x \in [-2.3, 2.4]$

C. $x_1 \in [-2.3, 2.4]$ and $x_2 \in [4, 8]$

D. $x \in [2.4, 4.1]$

E. $x_1 \in [-5.9, -3.9]$ and $x_2 \in [-4, 2]$